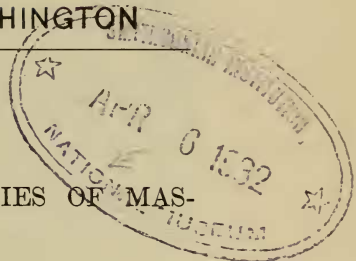


PROCEEDINGS
OF THE
BIOLOGICAL SOCIETY OF WASHINGTON



FIVE NEW SOUTH AMERICAN SPECIES OF MASCAGNIA.¹

BY C. V. MORTON.

The following new species were noted while identifying recent South American collections of Malpighiaceae. The genus is not a large one, thirty-nine species being recognized by Niedenzu in his recent valuable monograph of the family. Most of these are represented in the U. S. National Herbarium. The identification of the recent collections made by Killip and Smith, Pennell, Pittier, Klug, and others was not therefore especially difficult. Specific lines seem to be exceptionally sharp, in contrast to *Hiraea* and several other genera of the family.

Mascagnia lorentensis Morton, sp. nov.

Sect. *Eumascagnia*, Subsect. *Psilopetalis*, Ser. *Zygandra*. Liana ramulis gracilibus ca. 2 mm. diametro, glabris rubescentibus laevibus, lenticellis nullis, internodiis 3-4.5 cm. longis; lamina foliorum ovata (maximae 9 cm. longae et 4.5 cm. latae), basi rotundata complicata, apice sensim acuminata, membranacea, pallido-viridis, utrinque concolor, margine integra plana nec incrassata, glabra nitida, nervis primariis 5 vel 6 utrinque prominulis arcuatis infra marginem confluentibus, nervis secundariis tertiariisque utrinque prominulis reticulatis; petiolus maximus 9 mm. longus, 1 mm. diametro, teres pubescens supra leviter canaliculatus glanduliferus; stipulae lanceolatae 2 mm. longae, basi ca. 0.6 mm. latae, crassae, margine perspicue cartilagineo-incrassatae, persistentes; racemi 10, usque 12-flori, ca. 3 cm. longi in paniculam terminalem foliiferam 6 cm. longam dispositi, foliis paniculam versus gradatim reductis, foliis floriferis lanceolatis parce utrinque pubescentibus petiolatis stipulatis glanduliferis, pedunculo paniculae nullo, pedunculis racemorum usque 13 mm. longis, 0.6 mm. latis, dense strigosis, pedunculis floriferis usque 2 mm. longis apice valde incrassatis pubescentibus medium versus bracteolatis, pedicellis ca. 12 mm. longis gracilibus parce pubescentibus apice leviter incrassatis, bracteis bracteolisque parvis ovatis obtusis pubescentibus; flores ca. 12 mm. diametro; sepala ovalia ca. 3 mm. longa, apice rotundata obtusa pubescentia 8 glandulas oblongas gerentia; petala flava (sec. Klug) glabra, limbo suborbiculari ca. 4 mm. longo, cavo, dorso ala ca. 0.2 mm. lata carinato, ungue 1-1.5 mm. longo; filamenta brevia, ca. 1.1 mm. longa,

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glabra basi dilatata, antheris ovalibus, ca. 1 mm. longis, glabris; styli aequali paullo divergentes, vix 2 mm. longi, anticus apice truncatus, 2 postici perspicue uncinati; ovarium hirsutum; samarae nitidae glabratae; nux ovoidea, ca. 5 mm. longa, areola ventrali lineari-lanceolata, 5 mm. longa, 1 mm. lata; ala lateralis basi continua apice usque ad nucem incisa, apicem versus in 2 lobos lanceolatos vel ovaes incisa, 15 mm. lata et alta, margine irregulari; ala dorsalis semiovata, ca. 13 mm. longa, 5 mm. lata, basi cum ala laterali connata, apice acuta nucem multo superans, alis intermediis nullis.

Type in the U. S. National Herbarium, no. 1,455,893, collected in forest at Mishuyacu, near Iquitos, Dept. Loreto, Peru, alt. 100 meters, Febr.-March, 1930, by G. Klug (no. 907).

The closest relatives of the present species are probably *Mascagnia violacea* (Tr. & Planch.) Ndu. and *Mascagnia nervosa* Ndu. The following tabulation will show the distinguishing characters of the three species:

- Corolla violet; petals scarcely carinate; lateral samara wings distinct at base and apex; leaves up to 10 cm. long, revolute-margined; stipules subulate, small (scarcely 1 mm. long); panicles axillary, large (7.5-12.5 cm. long); floral peduncles 3 mm. long; pedicels 6-7 mm. long; bracts and bracteoles linear-subulate *M. violacea*.
- Corolla rose; petals carinate; lateral samara wings continuous at base and apex; leaves large (up to 15 cm. long), thick, veiny, revolute margined, biglandular at base; stipules setaceous, 1-1.5 mm. long; panicles axillary, large (over 10 cm. long); floral peduncles 2.4 mm. long; pedicels 8-11 mm. long; bracts linear-subulate; nut subglobose; areole broadly ovate. *M. nervosa*.
- Corolla yellow; petals carinate; lateral samara wings continuous at base, distinct at apex, both incised into lanceolate or oval lobes toward the apex; leaves up to 9 cm. long, membranous, the margin not revolute; stipules lanceolate, 2 mm. long; panicles terminal, 6 cm. long; floral peduncles up to 2 mm. long; pedicels about 12 mm. long; bracts and bracteoles ovate; nut ovoid; areole linear-lanceolate..... *M. lorentensis*.

***Mascagnia pittieri* Morton, sp. nov.**

Sect. *Eumascagnia*, Subsect. *Sericopetalis*. Rami ca. 2.5 mm. diametro, leviter striati flavescentes sparse et persistente pubescentes lenticellis nullis; lamina foliorum ovata, 9-10.5 cm. longa, 6-6.5 cm. lata, basi obtusa rotundata paullo obliqua, glandulis 2 flavidis parvis instructa, apice breviter et oblique acuminata (vix ultra 6 mm.), margine integra revoluta haud incrassata, supra olivaceo-viridis, nec nitida, glabrata (pilis paucis persistentibus), subtus pallidior flavido-viridis fere omnino glabra, membranacea, nervis medialibus primariisque (his 4 utrinque) supra impressis, subtus elevatis prominentibus flavis fere glabris, secundariis supra inconspicuis, subtus distantibus reticulatis vix prominulis; petiolus teres supra canaliculatus, ca. 1 mm. diametro, 10-15 mm. longus, sparse pubescens recurvatus, glandulis nullis; stipulae persistentes triangulares acuminatae, 1.5 mm. longae, basi 1 mm. latae, pubescentes; paniculae axillares, 5 cm. vel minus longae ex 3 racemis constatae, racemis terminalibus ca. 15-floris, 2 lateralibus ca. 7-floris, pedunculis panicularum ca. 2 cm. longis, ca. 1 mm. diametro, dense pubescentibus, apice 2 foliolis foliis caulinis similibus sed multo minoribus, ca. 7 mm. longis, 5 mm. latis, basi 2 glandulas magnas gerentibus nervis lateralibus haud prominulis, pedunculis racemorum 6-8 mm. longis, dense pubescentibus, pedunculis floriferis ca. 3 mm. longis, basi bracteis triangularibus ca. 1 mm. longis carinatis apice obtusiusculis pubescentibus, medio bracteolis vix 1 mm. longis obtusis

pubescentibus instructis, apice incrassatis abrupte dilatatis, pedicellis ca. 7 mm. longis, fere glabris gracilibus apice paullo incrassatis; sepalis connatis, glandulas 10 ovas 3 mm. longas sepala fere aequantes gerentia; petala ca. 6 mm. longa fere glabra nec sericea, limbo late ovato cavo denticulato, ungue 1 mm. longo; stamina inaequalia, filamentis basi dilatatis glabris, antheris ovalibus glaberrimis; stylus anticus 2 posticus paullulum brevior, 2.5 mm. longus, omnes recti, apice dilatati truncati vix uncinati, glabri; ovarium lobatum pubescens; nux ovata 6 mm. longa glabra, areola ventrali lanceolata 4 mm. longa, 1 mm. basi lata; ala lateralis continua orbicularis, 20–24 mm. diametro, apice usque 4 mm. incisa, sinu obtuso lato, venosa glabra membranacea; crista dorsalis semicordata, ca. 1 cm. longa, 4 mm. lata sinum non attingens; alis vel rugis intermediis nullis.

Type in the U. S. National Herbarium no. 531090, collected in the hills of Miraflores, above Palmira, Central Cordillera, State of Cauca, Colombia, alt. 1,200–1,600 meters, January, 1906, by H. Pittier (no. 900).

Apparently the present new species is nearest to *Mascagnia spruceana* Nduzu., described from the Río Negro between Barcellos and San Gabriel, Brazil (*Spruce* 2070). I have not seen a specimen of this species, which appears to differ in having larger bracts and bracteoles (4–5 mm. and 3–4 mm. respectively), these both acute and petiolate at base. The present species has triangular broad-based bracts and bracteoles, 1 mm. long or less. The petal limb of *M. spruceana* is described by Niedenzu as subplane, while that of *M. pittieri* is distinctly concave. The samaras of the two species are evidently quite different. Those of *M. spruceana* are puberulous and very large, the wings 4.5 cm. in diameter, the dorsal crest 2 cm. high, the areole suborbicular and 3 mm. long. Our species has glabrous, smaller samaras, the wings 20–24 mm. in diameter, the dorsal crest 1 cm. high, and the areole lanceolate (4 mm. long, 1 mm. wide at base).

Mascagnia ovatifolia (Kunth) Griseb. may be distinguished from *M. pittieri* as follows:

Leaf margin revolute; racemes 7–15-flowered in small panicles less than 5 cm. long; claw of petals 1 mm. long; anthers glabrous; samaras glabrous.....	<i>M. pittieri</i> .
Leaf margin not revolute; racemes up to 40-flowered, up to 10 cm. long, in very large panicles; claw of petals 3 mm. long; anthers pilose; samaras pilose.....	<i>M. ovatifolia</i> .

Mascagnia nobilis Morton, sp. nov.

Subg. *Mesogynixa*, Sect. *Pleuropterys*. Liana ramis tortilibus striatis, 4.5 mm. diametro, dense flavido-sericeis (sub indumento nigris), internodiis valde elongatis, ca. 15 cm. longis; lamina foliorum late ovalis, 10–13 cm. longa, 8–9 cm. lata, basi rotundata parum obliqua, apice brevissime apiculata (apiculo vix 4 mm. longo), membranacea, supra glabra (costa excepta) atro-olivacea nitida, subtus glandulis paucis adspersa pallide olivaceo-brunnea densissime pubescens, pilis gracillimis stipitatis medio semel furcatis (stipitibus rectis ramis late patentibus), margine vix revoluta eglandulifera, nervis medialibus primariisque (his 5–6 utrinque) supra immersis obscuris, subtus pallidis elevatis valde prominentibus, nervis secundariis distantibus inter se plus minusve parallelis utrinque vix prominulis; petiolus striatus 17–25 mm. longus, ca. 2 mm. diametro, dense sericeus supra canaliculatus; stipulae crassae persistentes, vix 0.5 mm. longae, petioli basi utrinque affixae; paniculae axillares, fructu 21.5 cm. longae, pedunculo 7 cm. longo densissime sericeo (sub indumento nigro),

foliolis foliis caulinis similibus sed minoribus, 3 cm. longis, 2 cm. latis; flores non suppetunt; racemi ca. 12 in paniculam dispositi, ca. 10-flori, pedunculo racemi infimi 21 mm. longo, pedunculis superioribus gradatim brevioribus, pedunculis floriferis 3.5–4 mm. longis basi bracteatis, 2 bracteolae ca. 1.5 mm. infra apicem gerentibus, bracteis bracteolisque ca. 2 mm. longis lanceolato-deltaoideis acutis eglanduliferis dense sericeis, pedicellis ca. 4.5 mm. longis; sepala glandulis ovalibus instructa, apice recurvata; samarae pallido-virides (sec. Killip & Smith) siccitate brunneae dense sericeae, areola ventrali ovata ca. 4 mm. longa, nuce subglobosa ca. 6 mm. longa; alae laterales membranaceae venosae ovaes ca. 25 mm. latae, 40–45 mm. longae, marginibus exterioribus subintegris haud erosis lacerisve; ala dorsalis semiorbicularis 4 mm. lata nucem multo superans, rugis accessoriis nullis.

Type in the U. S. National Herbarium, no. 1,461,295, collected at Yurimaguas, lower Río Huallaga, Dept. Loreto, Peru, in woods, alt. about 135 meters, August 22–September 9, 1929, by E. P. Killip and A. C. Smith (no. 27557).

Mascagnia nobilis is related to *M. sericans* Ndz. and *M. stannea* (Griseb.) Ndz. The former is an erect shrub about 2 meters high, with glabrate branches and short internodes. *M. nobilis* is, on the contrary, a high-climbing vine with densely yellow-sericeous branches and elongate internodes. The leaves also of *M. sericans* are quite different from those of *M. nobilis*, being coriaceous and densely sericeous (with the secondary veins prominently reticulate above and not at all parallel), rather than membranous, glabrous above, and spreading pubescent beneath (the secondary veins immersed above and more or less parallel). Moreover, *M. sericans* has no stipules and bears very different, coriaceous, much smaller samaras.

M. stannea Ndz., a species from the distant Mt. Aguacate in Nicaragua, is more closely related. It differs, however, in its glabrate branches and shorter internodes and in the shining metallic pubescence of the under side of the leaves. The panicle is terminal (rather than axillary, as in *M. nobilis*) and three times compound, and is composed of corymbs rather than of racemes. Moreover, the peduncles are bibracteolate at apex, rather than appreciably below the apex.

***Mascagnia hondensis* Morton, sp. nov.**

Subg. *Mesogyनिया*, Sect. *Pleuropterys*. Rami teretes glabrati pallidofuscescentes, lenticellis minutis instructi, ca. 3 mm. diametro; lamina foliorum ovata basi obtusa rotundata apice breviter acuminata (ca. 1 cm.), maximae 9 cm. longae et 5.5 cm. latae, margine paullo revoluta cartilagineo-incrassata glandulas abortivas gerens, adulta coriacea glabrata concolor siccitate olivacea, supra lucida, costa utrinque prominente, nervis primariis utrinque 5 vel 6, secundariis perspicue reticulatis supra paullo subtus valde prominentibus; petiolus glabratus crassiusculus, ca. 10 mm. longus, 1.5 mm. diametro, supra canaliculatis glandulas nonnullas parvas gerens; stipulae parvae, triangulares, petioli basi utrinque affixae; corymbi pauciflori ad folia axillaria superiora et in paniculam terminalem dispositi, pedunculis floriferis brevissimis, 1–1.5 mm. longis, apice bibracteolatis, pedicellis (fructu) ca. 14 mm. longis, ca. 0.5 diametro, apice incrassatis, bracteis bracteolisque parvis ovatis apice obtusis rotundatis persistentibus; sepala ovata apice obtusa 8 glandulas ovaes gerentia; flores non suppetunt; samarae papilioniformes fuscescentes dense sericeae; nux ovoidea ca. 6 mm.

longa, 5 mm. lata, densissime aureo-sericea, areola ventrali ovali, ca. 5 mm. longa, 3 mm. lata, leviter convexa; alae laterales transverse obdeltoideae, maximae 24 mm. longae et 25 mm. latae, marginibus exterioribus perspicue et irregulariter laceris; crista dorsalis basi attenuata apice usque 1 mm. lata, nucem longe superans, alis vel tuberculis intermediis nullis; torus pyramidalis triangularis ca. 5 mm. longus.

Type in the U. S. National Herbarium, no. 1,059,701, collected at Honda, Dept. Tolima, Colombia, alt. about 220 meters, August, 1919, by Brother Ariste Joseph (no. A371).

The present species is apparently a very distinct one in the section *Pleuropterys*, but in the absence of flowers its relationship can not be definitely stated. It is perhaps most nearly allied to *Mascagnia lehmanniana* Nduz., described from the distant savannah region near Orocué along the Meta River, Colombia. That species (of which the samaras are unknown) apparently differs in its elongate, many-flowered racemes, in its longer floral peduncles (4–5 mm.), and especially in its much larger, very acute, lanceolate-linear bracts and bracteoles. *M. hondensis*, on the contrary, has the flowers in few-flowered corymbs (these axillary or aggregate in a terminal panicle), short floral peduncles (1–1.5 mm.), and small, obtuse, ovate bracts and bracteoles.

Mascagnia dumetorum Morton, sp. nov.

Subg. *Mesogyne*, Sect. *Pleuropterys*. Liana ramis annotinis gracilibus rubescentibus glabris, 2 mm. diametro, lenticellis numerosis minutis praeditis, ramis hornotinis dense pubescentibus, pilis albidis patentibus; lamina foliorum ovata, maximae ca. 3.5 cm. longae et 4.5 cm. latae, basi complicata rotundata apice acriter et sensim acuminata, margine plana basi biglandulosa, chartacea, supra pallido-viridis dense puberula demum glabrata nitidaque, subtus fuscescens adulta dense et breve pilosa, nervis primariis utrinque ca. 5 supra prominulis, subtus prominentibus, secundariis reticulatis solum subtus prominulis; petiolus ca. 1 cm. longus, juventute dense puberulus demum glabratus, eglanduliferus; stipulae minutae ca. 1 mm. longae, lineares subulatae nigrae; racemi ramulos breves axillares folioliferos 17–20 mm. longos, ca. 1.2 mm. diametro, dense breve albido-pilosos terminantes, foliolis foliis similibus sed multo minoribus, 13–27 mm. longis, 9–18 mm. latis, stipulis eis foliorum similibus; racemi ca. 5 cm. longi, ca. 15-flori, simplices, pedunculis 15–18 mm. longis, pedunculis floriferis 6–7 mm. longis, 2 bracteolis instructis, pedicellis 4.5–5 mm. longis apice parum incrassatis, sicut pedunculis dense albido-pilosis sericeis, bracteis bracteolisque lineari-subulatis, illis ca. 5 mm. longis, his ca. 3.5 mm. longis, dense albido-pilosis; flores ca. 2 cm. diametro; sepala ovata ca. 4.5 mm. longa, dense sericea apice obtusiuscula recurvata, 8 glandulas oblongas ca. 3 mm. longas gerentia; petala lutea (sec. Pennell), patentia, fere glabra, pilis perpaucis subtus instructis, limbo suborbiculari (quinti ovali) plano, margine integro paullulum undulato, 6 mm. longo, 7 mm. lato, ungue ca. 3 mm. longo; androeceum actinomorphy staminibus fertilibus 10, filamentis rectis ca. 3.5 mm. longis, filamentis oppositipetalis paulo brevioribus, basi dilatatis, glabris, antheris ovalibus aequalibus, ca. 1 mm. longis, glabris; styli aequales a basi paulo divergentes, 2.5 mm. longi, anticus tortilis, 2 postici subrecti, dorso apicis acuti interne gynixiferi, glabri; ovarium dense pubescens; nux samarae subovoidea, ca. 5 mm. longa, dense pubescens, areola ventrali ovata, 3 mm. longa, 2 mm. lata; alae laterales papilioniformes transverse obdeltoideae, 20 mm. altae (basi 7 mm. altae), 15 mm. latae, margine exteriori leviter undulata, chartaceae, venosae, parce pubescentes; ala dorsalis lineari-oblonga 11 mm. alta, ca.

3 mm. lata, pubescens, alis vel rugis longitrorsis intermediis nullis, rugis transversis numerosis prominentibus.

Type in the U. S. National Herbarium, no. 1,042,974, collected in thickets at Sincé, Dept. Bolívar, Colombia, alt. 120-170 meters, January 25, 1918, by F. W. Pennell (no. 4033).

The present plant is allied to *Mascagnia pubiflora* (Juss.) Griseb., a species known only from two collections in Brazil and differing in numerous characters, which may be summarized as follows:

- Leaves bullate, glaucous-incanous beneath, with marginal glands; primary nerves 6-8; petioles 3-5 mm. long; stipules triangular, caducous, 0.5 mm. long; racemes up to 40-flowered and 20 cm. long; bracts and bracteoles petiolate, ovate to lanceolate (the former glanduliferous); peduncles 8-12 mm. long; pedicels equal to or longer than peduncles; petals densely sericeous, the limb oval, 10-12 mm. long; filaments and anthers puberulous; samaras with linear-lanceolate ventral areole.....*M. pubiflora.*
- Leaves not bullate, fuscous beneath, without marginal glands; primary nerves about 5; petioles about 10 mm. long; stipules linear-subulate, persistent, about 1 mm. long; racemes up to 15-flowered and 5 cm. long; bracts and bracteoles linear-subulate, not petiolate, not glanduliferous; peduncle 6-7 mm. long; pedicels 4.5-5 mm. long; petals almost glabrous, the limb suborbicular, 6 mm. long; filaments and anthers glabrous; samaras with ovate ventral areole.....*M. dumetorum.*